

# Mineral Industry Surveys

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## VANADIUM IN JUNE 1999

According to *Metal Bulletin*, U.S. ferrovanadium prices during June ranged from \$5.10 to \$5.25 per pound of vanadium content, compared with \$5.10 to \$5.30 in May. The range for European ferrovanadium prices was \$10.40 to \$10.85 per kilogram in June.

In May, European ferrovanadium prices ranged from \$10.30 to \$10.90. For vanadium pentoxide, the June range as published by *Metal Bulletin* was \$1.98 to \$2.20 per pound, while in May it was \$1.93 to \$2.08.

TABLE 1  
U.S. CONSUMPTION AND CONSUMER STOCKS OF VANADIUM, BY FORM 1/

(Kilograms, contained vanadium)

	1998 p/		1999			
			May		June	
	Consumption	Stocks	Consumption	Stocks	Consumption	Stocks
Ferrovandium 2/	3,710,000	317,000	233,000	367,000	238,000	283,000
Vanadium-aluminum alloy	W	13,600	W	15,800	W	12,200
Other 3/	506,000	10,200	31,800	11,800	32,500	9,120
Total	4,220,000	341,000	265,000	394,000	271,000	304,000

p/ Preliminary. W Withheld to avoid disclosing company proprietary data; included with "Other."

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes other vanadium-iron-carbon alloys as well as vanadium oxides added directly to steel.

3/ Includes other vanadium alloys, vanadium metal, vanadium pentoxide, vanadates, chlorides, other specialty chemicals, and items indicated by symbol "W."

TABLE 2  
U.S. CONSUMPTION OF VANADIUM, BY END USE 1/

(Kilograms, contained vanadium)

	1998 p/	1999		
		May	June	Year to date
Steel:				
Carbon	1,420,000	80,700	83,700	538,000
High-strength low-alloy	1,020,000	49,300	55,400	312,000
Stainless and heat-resisting	42,500	7,100	5,460	42,200
Full alloy	930,000	57,900	49,800	365,000
Tool	263,000	32,200	28,000	174,000
Total steel	3,670,000	227,000	222,000	1,430,000
Superalloys	20,900	1,330	1,240	7,580
Miscellaneous and unspecified 2/	526,000	36,300	46,900	242,000
Total consumption	4,220,000	265,000	271,000	1,680,000

p/ Preliminary.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes cast irons, alloys excluding steel and superalloys, chemical and ceramic uses, and other miscellaneous and unspecified uses.

TABLE 3  
U. S. IMPORTS AND EXPORTS OF ALUMINUM-VANADIUM MASTER ALLOY AND VANADIUM  
METAL, INCLUDING WASTE AND SCRAP 1/

(Kilograms, gross weight)

	Aluminum-vanadium master alloy		Vanadium metal, including waste and scrap	
	Quantity	Value	Quantity	Value
Imports for consumption:				
1998	298,000	\$496,000	12,200	\$491,000
1999:				
March	--	--	68	47,000
April	--	--	9,990	187,000
May:				
Germany	--	--	2,320	65,700
Year to date	--	--	19,700	431,000
Exports:				
1998	856,000	11,500,000	346,000	7,160,000
1999:				
March	44,600	581,000	28,800	4,900,000
April	88,200	1,150,000	16	38,500
May:				
Canada	886	11,500	--	--
Finland	--	--	7	6,000
Germany	--	--	10	7,900
Italy	1,420	18,400	--	--
Mexico	16,200	211,000	--	--
United Kingdom	1,310	17,100	18,500	338,000
Total	19,800	258,000	18,600	352,000
Year to date	168,000	2,200,000	87,200	1,640,000

1/ Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census

TABLE 4  
U. S. IMPORTS AND EXPORTS OF FERROVANADIUM, VANADIUM PENTOXIDE (ANHYDRIDE) AND  
OTHER OXIDES AND HYDROXIDES OF VANADIUM 1/

(Kilograms, contained vanadium)

	Ferrovanadium		Vanadium pentoxide (anhydride) 2/		Other oxides and hydroxides of vanadium	
	Quantity	Value	Quantity	Value	Quantity	Value
Imports for consumption:						
1998	1,620,000	\$39,300,000	847,000	\$12,300,000	33,000	\$574,000
1999:						
March	59,200	753,000	--	--	--	--
April	156,000	1,660,000	814	13,500	--	--
May:						
Austria	43,100	460,000	--	--	--	--
Canada	37,900	493,000	--	--	--	--
Japan	--	--	1,000	12,200	--	--
South Africa	113,000	1,200,000	--	--	--	--
Total	195,000	2,150,000	1,000	12,200	--	--
Year to date	612,000	7,800,000	29,400	365,000	--	--
Exports:						
1998	579,000	13,700,000	681,000	6,850,000	232,000	2,830,000
1999:						
March	24,900	365,000	61,000	415,000	3,130	35,400
April	24,900	356,000	42,600	245,000	5,650	65,700
May:						
Belgium	--	--	70,300	366,000	--	--
Brazil	--	--	4,020	14,200	--	--
Canada	16,300	222,000	--	--	5,900	77,700
Germany	--	--	33,700	187,000	--	--
Italy	--	--	12,600	67,600	--	--
Mexico	376	6,730	--	--	--	--
Total	16,700	228,000	121,000	635,000	5,900	77,700
Year to date p/ 3/	140,000	2,070,000	467,000	2,860,000	28,500	305,000

p/ Preliminary.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ May include catalysts containing vanadium pentoxide.

3/ May include revisions to previous months' data.

Source: Bureau of the Census

TABLE 5  
U.S. IMPORTS FOR CONSUMPTION OF VANADIUM-BEARING ASH, SLAG 1/

(Kilograms, contained vanadium pentoxide)

	Ash and residues		Ash and residues (not from the manufacture of iron and steel)		Slag, from the manufacture of iron and steel	
	Quantity	Value	Quantity	Value	Quantity	Value
Imports for consumption:						
1998	3,030,000	\$9,960,000	2,280,000	\$1,710,000	1,250,000	\$10,500,000
1999:						
March	229,000	1,090,000	154,000	93,600	279,000	558,000
April	292,000	942,000	202,000	115,000	--	--
May:						
Canada	16,800	16,300	234,000	112,000	--	--
Italy	202,000	110,000	--	--	--	--
United Kingdom	67,700	116,000	--	--	--	--
Total	287,000	242,000	234,000	112,000	--	--
Year to date	1,100,000	3,080,000	877,000	463,000	279,000	559,000

1/ Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.

TABLE 6  
U.S. IMPORTS FOR CONSUMPTION OF  
MISCELLANEOUS VANADIUM CHEMICALS 1/

(Kilograms, contained vanadium)

	Sulfates		Vanadates	
	Quantity	Value	Quantity	Value
Imports for consumption:				
1998	350	\$19,300	129,000	\$1,410,000
1999:				
March	--	--	16,400	143,000
April	--	--	630	36,100
May:				
Germany	--	--	572	42,600
Japan	--	--	4	12,600
Total	--	--	576	55,200
Year to date	--	--	41,300	481,000

1/ Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census